Translation

PATENT COOPERATION TREATY

PCT/JP2003/012281

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference CZ03-001	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/012281	International filing date (*day/month/year*) 25 September 2003 (25.09.2003)	Priority date (*day/month/year*) 06 December 2002 (06.12.2002)
International Patent Classification (IPC) or national classification and IPC G09F 9/46, H05B 33/12, 3/14, G02F 1/13357, 1/1343, G09G 3/36, 3/30		
Applicant CITIZEN WATCH CO., LTD.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 12 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *(sent to the applicant and to the International Bureau)* a total of 6 sheets, as follows:

      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

   ☒ Box No. I Basis of the report
   ☐ Box No. II Priority
   ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   ☒ Box No. IV Lack of unity of invention
   ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   ☐ Box No. VI Certain documents cited
   ☐ Box No. VII Certain defects in the international application
   ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
06 July 2004 (06.07.2004)	13 December 2004 (13.12.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2003/012281

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

☐ international search (under Rules 12.3 and 23.1(b))

☐ publication of the international application (under Rule 12.4)

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ The international application as originally filed/furnished

☒ the description:

pages 1-52, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

pages 4, 6-31, as originally filed/furnished

pages* _____, as amended (together with any statement) under Article 19

pages* 1-3, 5, 32-39 received by this Authority on 06 July 2004 (06.07.2004)

pages* _____ received by this Authority on _____

☒ the drawings:

pages 1-28, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2003/012281

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has:

   ☒ restricted the claims.

   ☐ paid additional fees.

   ☐ paid additional fees under protest.

   ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

   ☒ complied with.

   ☐ not complied with for the following reasons:

4. Consequently, this report has been established in respect of the following parts of the international application:

   ☒ all parts.

   ☐ the parts relating to claims Nos. _____ .

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP 03/12281

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	3, 4, 7-12, 15, 17, 19, 21, 23, 24, 27, 28, 30, 31, 37, 39	YES
	Claims	1, 2, 5, 6, 13, 14, 16, 18, 20, 22, 25, 26, 29, 32-36, 38	NO
Inventive step (IS)	Claims	15, 17, 19, 30	YES
	Claims	1-14, 16, 18, 20-29, 31-39	NO
Industrial applicability (IA)	Claims	1-39	YES
	Claims		NO

2. Citations and explanations

Document 1: JP 2002-196702 A
Document 2: JP 2002-140022 A
Document 3: JP 2002-62856 A
Document 4: JP 59-163787 A
Document 5: JP 5-258861 A
Document 6: JP 2002-341331 A
Document 7: JP 2000-162640 A
Document 8: JP 2002-151524 A
Document 9: JP 3-269415 A
Document 10: JP 2001-237064 A

Claims 1 and 6

Documents 1 and 2 disclose configurations wherein the liquid crystal display elements and the EL light emitting elements are provided with different reflective films. Consequently, the invention that is set forth in claims 1 and 6 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 2

Document 2 discloses a configuration wherein the switching elements for controlling EL and the EL light emitting elements are disposed upon a substrate, in that

order. In addition, document 3 discloses an EL display device with a configuration wherein the switching elements for controlling EL and the EL light emitting elements are disposed upon a substrate, in that order. Consequently, the invention that is set forth in claim 2 lacks novelty and does not involve an inventive step in the light of document 2. Likewise, the invention that is set forth in claim 2 does not involve an inventive step in the light of documents 1 and 3.

Claim 3

Documents 4 and 5 disclose EL display devices with configurations wherein the EL light emitting elements and the switching elements for controlling EL are disposed upon a substrate, in that order. Consequently, the invention that is set forth in claim 3 does not involve an inventive step in the light of documents 1, 2, 4 and 5.

Claim 4

Documents 3-5 disclose bottom emission-type EL display devices. Consequently, the invention that is set forth in claim 4 does not involve an inventive step in the light of documents 1-5.

Claim 5

Document 2 discloses a configuration wherein the EL light emitting elements and the switching elements for controlling EL are connected via openings in the insulation film. Consequently, the invention that is set forth in claim 5 lacks novelty and does not involve an inventive step in the light of document 2.

Claim 7

Document 3 discloses a configuration wherein protective films are provided upon the EL light emitting

elements. Consequently, the invention that is set forth in claim 7 does not involve an inventive step in the light of documents 1-3.

Claim 8

Document 2 discloses a configuration wherein flattening films are formed upon the switching elements for controlling EL. Consequently, the invention that is set forth in claim 8 does not involve an inventive step in the light of documents 1-3.

Claim 9

Documents 6 and 7 disclose configurations wherein light diffusion members are provided to the flattening films. Consequently, the invention that is set forth in claim 9 does not involve an inventive step in the light of documents 1-3, 6 and 7.

Claim 10

In the inventions that are disclosed in documents 1 and 2, the reflecting electrodes of the liquid crystal display elements are not disposed upon the EL light emitting elements. However, the configuration in question can be said to be a configuration wherein openings are provided to the reflecting electrodes of the liquid crystal display elements in a region that overlaps with the EL light emitting elements. Consequently, the invention that is set forth in claim 10 does not involve an inventive step in the light of documents 1-3.

Claims 11 and 12

Document 1 discloses configurations wherein the surfaces of the reflecting electrodes and the flattening films have an undulating shape. Consequently, the invention that is set forth in claims 11 and 12 does not

involve an inventive step in the light of documents 1-3.

Claims 13 and 14

Documents 1 and 2 disclose configurations wherein the switching elements for controlling the liquid crystal layers and the display electrodes are disposed upon a substrate, in that order, and the switching elements for controlling the liquid crystal layers and the display electrodes are connected via openings in the insulation film. Consequently, the invention that is set forth in claims 13 and 14 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 15

The abovementioned documents do not disclose a configuration wherein a display electrode is formed in a region that approximately covers one group of switching elements comprising a switching element for controlling the liquid crystal layer and a switching element for controlling EL. Consequently, the invention that is set forth in claim 15 is novel and involves an inventive step.

Claims 16 and 20

Documents 1 and 2 disclose configurations wherein the switching elements are configured from polysilicon thin-film transistors. Consequently, the invention that is set forth in claims 16 and 20 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 17

The abovementioned documents do not disclose configurations comprising switching elements for controlling EL and switching elements for controlling the liquid crystal layers, wherein the gate electrodes thereof

are interconnected and the source electrodes thereof are mutually independent. Consequently, the invention that is set forth in claim 17 is novel and involves an inventive step.

Claim 18

Documents 1 and 2 disclose configurations comprising switching elements for controlling EL and switching elements for controlling the liquid crystal layers, wherein the scanning lines thereof are independent and the data lines thereof are shared; i.e., configurations wherein among the switching elements for controlling EL and the switching elements for controlling the liquid crystal layer, adjacent electrodes are connected, and aming adjacent switching elements for controlling EL and switching elements for controlling the liquid crystal layer, the source electrodes are connected. Consequently, the invention that is set forth in claim 18 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 19

The abovementioned documents do not disclose a configuration comprising switching elements for controlling EL and switching elements for controlling the liquid crystal layers, wherein the source electrodes thereof are independent. Consequently, the invention that is set forth in claim 19 is novel and involves an inventive step.

Claim 21

The fact that both amorphous silicon and polysilicon can be used in thin film transistors for display elements is well known to a person skilled in the art, as disclosed in document 8; therefore, it is merely a simple design

matter for a person skilled in the art to select either material for use. Consequently, the invention that is set forth in claim 21 does not involve an inventive step in the light of documents 1, 2 and 8.

Claim 22

Documents 1 and 2 disclose configurations that comprise color filters. Consequently, the invention that is set forth in claim 22 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 23

Scattering-type liquid crystals are well known, as disclosed in document 9. Consequently, the invention that is set forth in claim 23 does not involve an inventive step in the light of documents 1, 2 and 9.

Claim 24

Document 10 discloses an EL display device wherein an insulation film comprising a member for absorbing water components is disposed upon a substrate. Consequently, the invention that is set forth in claim 24 does not involve an inventive step in the light of documents 1, 2 and 10.

Claim 25

Documents 1 and 2 disclose configurations that are provided with light deflecting plates. Consequently, the invention that is set forth in claim 25 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 26 and 29

Document 1 discloses configurations that comprise phase contrast plates and light deflecting plates.

Consequently, the invention that is set forth in claims 26 and 29 lacks novelty and does not involve an inventive step in the light of document 1.

Claims 27 and 28

Documents 6 and 7 disclose liquid crystal display devices with configurations which comprise light diffusion layers; therefore, it would be easy for a person skilled in the art to apply the layers in question in an EL light emitting element. Consequently, the invention that is set forth in claims 27 and 28 does not involve an inventive step in the light of documents 1 and 2.

Claim 30

The abovementioned documents do not disclose the feature wherein the transmission factor of the liquid crystal layer is maximized when the EL light emitting element is emitting light. Consequently, the invention that is set forth in claim 30 is novel and involves an inventive step.

Claims 31 and 39

Documents 3-5 disclose bottom emission-type EL display devices; therefore, it would be easy for a person skilled in the art to configure so that the EL display elements in the display devices that are disclosed in documents 1 and 2 are bottom illumination-type elements. As a result, the display surfaces of the EL display device and of the liquid crystal display device are different; consequently, the invention that is set forth in claims 31 and 39 does not involve an inventive step in the light of documents 1-5.

Claims 32 and 33

Documents 1 and 2 disclose configurations wherein

the liquid crystal display elements and the EL light emitting elements are provided with reflecting electrodes. Consequently, the invention that is set forth in claims 32 and 33 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 34

Documents 1 and 2 disclose configurations wherein the EL light emitting elements comprise transparent conductive films that function as electrodes. Consequently, the invention that is set forth in claim 34 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claims 35 and 36

Documents 1 and 2 disclose configurations that comprise switching elements for controlling EL and switching elements for controlling the liquid crystal layers. Consequently, the invention that is set forth in claims 35 and 36 lacks novelty and does not involve an inventive step in the light of documents 1 and 2.

Claim 37

Documents 4 and 5 disclose configurations wherein the EL light emitting elements and the switching elements for controlling EL are disposed upon a substrate, in that order, and it would be easy for a person skilled in the art to substitute the configurations that are disclosed in documents 4 and 5 for the configuration that is disclosed in document 2, wherein the switching elements for controlling EL and the EL light emitting elements are disposed upon the substrate, in that order. Consequently, the invention that is set forth in claim 37 does not involve an inventive step in the light of documents 1, 2, 4 and 5.

Claim 38

In the inventions that are disclosed in documents 1 and 2, the reflecting electrodes of the liquid crystal display elements are not disposed upon the EL light emitting elements. However, the configuration in question can be said to be a configuration wherein openings are provided to the reflecting electrodes of the liquid crystal display elements in a region that overlaps with the EL light emitting elements. Consequently, the invention that is set forth in claim 38 lacks novelty and does not involve an inventive step in the light of documents 1-3.